# Safety Lines

The Newsletter of Minnesota OSHA

Number 49 Fall 2005

*http://www.doli.state.mn.us*

## Working safely around outside grain storage bins

*By Deb Peterson, Mankato Area Supervisor*

Each summer, grain handling and farm operations complete the task of unloading grain bins in preparation for the fall harvest. To avoid serious injuries or deaths during the unloading process, remember the following tips.

- Grain bins must **never** be entered by anyone while the loading or unloading equipment is operating. **This is extremely important.** When bottom unloading augers are running, a person entering the bin could sink into the flowing grain without warning, resulting in suffocation.

- If bin entry is necessary, the loading/unloading systems must be shut down and locked out, and all additional procedures set forth in 1910.272(g) must be followed.

- Proper confined-space entry procedures should be followed and equipment provided. These precautions include: atmospheric testing, ventilation, use of a body harness and lifeline by the entrant, designation of an observer or standby person, rescue equipment, employee training, provisions for communication and consideration of possible bridging or sidewall grain build-up conditions.

- For entry into flat storage structures, follow the procedures set forth in 1910.272(h).

- If a bottom unloading system is broken and a grain bin must be unloaded with a portable system, read the operator's manual carefully for all safety considerations. **Have respect for the dangers inherent with portable bin unloading equipment. They are not over-grown household vacuum cleaners.** Deaths have occurred when operators have entered bins while a portable unloading system was operating. Individuals have been drawn down into the grain, resulting in suffocation. Use the bin entry equipment and procedures listed above, following 1910.272(g).

- Examine ladders mounted externally on grain bins. Fixed ladders must meet the requirements of 1910.27. For instance, ladder rungs shall not be spaced more than 12 inches apart and the distance between the rung and the bin surface shall be a minimum of seven inches to provide the climber with good footing. If a portable ladder is used to gain access to the bottom of a fixed ladder, be sure to tie-off the portable ladder so that it cannot be

***Grain storage bin*, continues ...**

# Isakson named new Minnesota OSHA Compliance director

Jeff Isakson has been named as the new Minnesota OSHA Compliance director. He began working for the state of Minnesota in November 2003. Previously, he spent 14 years managing safety and health in pulp and paper facilities in Michigan and Minnesota.

Minnesota OSHA Director Jeff Isakson

His vision is to continue to pursue excellence as a state-plan state and in making Minnesota workplaces the safest in the nation. Iskason said he has been especially impressed and excited about the caliber of employees within the MNOSHA unit, their dedication toward worker safety and health, and the professionalism used during compliance inspections. He sees a great opportunity to grow in the areas of technology, compliance assistance, outreach and cooperative programs, and the impact MNOSHA can continue to have making sure every worker in the state has a safe and healthful workplace.

Isakson earned a bachelor's degree in applied science and a master's degree in industrial safety, both from the University of Minnesota – Duluth.

He has been married for 27 years to his wife Chris; they have one son, Adam, who is a junior in high school.

# Two Minnesota worksites achieve MNSTAR status


Louisiana-Pacific Corporation, Two Harbors, Minn.


Specialty Minerals, Inc., International Falls, Minn.

The Department of Labor and Industry recently recognized Louisiana-Pacific Corporation, Two Harbors, Minn., and Specialty Minerals, Inc., International Falls, Minn., as Minnesota Star (MNSTAR) worksites. Achieving MNSTAR status exempts worksites from Minnesota OSHA scheduled compliance inspection lists for three years. For more information, visit www.doli.state.mn.us/mnstar.html.

***Grain storage bin*, continues ...**

displaced by the climber. If a ladder exceeds 20 feet, a cage shall be provided, following the criteria in 1910.27(d)(1). If the roof of a grain storage bin is not equipped with standard guardrail systems, use fall protection equipment.

- Provide for adequate lighting in the area of grain bins if work and climbing are continued throughout the night.

By using the tips and adhering to the regulations referenced above, grain bin injuries and deaths will be reduced.

# Grant dollars help employers increase worker safety, health


Equipment purchased with funds from the Safety Grant Program (clockwise from upper left): a trench box, Quality Underground; Bobcat, Adam Smith; EZ Lift, St. Anthony Health Center.

The Safety Grant Program, of Minnesota OSHA's Workplace Safety Consultation unit, awards funds up to $10,000 to qualifying employers for projects designed to reduce the risk of injury and illness to their workers. To qualify, an employer must meet certain conditions and must complete a safety grant application form.

More information about program requirements and a downloadable application form are available online at www.doli.state.mn.us/grants.html.

**Since 1995, Workplace Safety Consultation has issued:**

**1,510 safety grants**

**totaling:**

**$10.4 million**

# Industry focus group, MNOSHA
## constructing a stronger breakfast-seminar program

*By Gary Robertson, MNOSHA Training Officer*

Minnesota OSHA has received help from the construction industry, finding ways to improve and strengthen the popular Construction Breakfast program. Company safety directors, safety consultants and insurance agents volunteered their time and expertise to work as a focus group with MNOSHA, brainstorming ways to keep focusing on the pertinent safety needs of the ever-changing construction industry. The breakfast seminars are offered five times a year.

MNOSHA solicited help from those in the industry to plan presentations that would be valuable to everyone in the industry, making the MNOSHA Construction Breakfast program "the" construction industry's program – a program that promotes safety in a way that provides construction employers, employees and all stakeholders with pertinent knowledge and skills at each brief morning meeting.


The topic list the focus group constructed contains enough ideas for presentations for the next two-and-a-half years. It was suggested that more specific information be presented about previous topics and that the emphasis be on making MNOSHA standards more understandable.

The group then determined ways to make the presentations more meaningful to the audience. The goal is to tell the audience members what they really need to know about each topic in a way they would accept and use the information being presented. The focus group's suggestions came fast and furious:

- have contractors and other stakeholders take part in the presentations;
- make the information more "real" and get people involved;
- show the hazards and the best practices to abate the hazards;
- use real, hands-on examples;
- encourage the smaller companies, which need this information, to attend;
- show better pictures, when possible, to help explain what is being said;
- have an information table with handouts available;
- at every meeting have MNOSHA explain what standard violations it is seeing and citing;
- have the focus group help select the presenter; and
- advertise the Construction Breakfast program.

This should be a very exciting and interesting year for the Construction Breakfast program. The

*Focus group*, continues ...

*Focus group*, continued ...

first two presentations are in place and MNOSHA is looking forward to unveiling the focus group's complete list of topic choices and implementing the group's suggestions for improving each presentation.

A special thanks to the focus group members for their hard work. Although the work is on track, it is not done. MNOSHA will continue to meet with this group to make adjustments to keep the program working for and with the construction industry.

Complete information about the Construction Breakfast program is available online at www.doli.state.mn.us/brkfst.html. Online registration is available for each seminar prior to the date of the event.

## Construction Breakfast

### 2005/2006 menu

• **Sept. 19, 2005**
Personal fall-arrest systems

• **Nov. 15, 2005**
Skid steer worksite safety revisited

• **Jan. 17, 2006**
Cost of not having a safety program

• **March 21, 2006**
A hands-on AWAIR program that works

• **May 16, 2006**
Tubular welded-frame scaffold safety

# Minnesota OSHA, Ford Motor Company sign safety partnership

Representatives from Minnesota OSHA Compliance signed a partnership Aug. 24 with the International Union of United Auto, Aerospace and Agricultural Implement Workers (UAW) and the Ford Motor Company.

The partnership will help Ford and MNOSHA share information to reduce worker injury and illnesses by leveraging the resources of all the parties through the systematic anticipation, identification, evaluation and control of health and safety hazards.

After the signing, the group toured the St. Paul facility and saw how Ford Ranger trucks are built.

Pictured above with Ford Motor Company employees and a new Ford Ranger truck are Minnesota OSHA and DLI representatives (l to r): Gary Anderson, Nancy Zentgraf, Jim Krueger, Jeff Isakson, Scott Brener and Roslyn Wade.

# Collaboration between nursing homes, MNOSHA makes strides toward ergonomic safety

*By Dave Ferkul and Jolyn Crum, MNOSHA Workplace Safety Consultation*

More than a year ago, Minnesota OSHA Workplace Safety Consultation (WSC) contacted a number of Minnesota nursing-home facilities to participate in a voluntary collaborative project. WSC hoped to increase the efforts in the facilities toward improving the safety and injury management systems by reducing the ergonomic risk-factors commonly associated with nursing staff members working in long-term care.

The project was established to assist facilities to reduce the severity and occurrence of musculoskeletal injuries that occur to the members of the nursing staff, particularly the nursing assistants.

A list of 105 qualifying facilities was generated; 52 were chosen as a "control" group and 53 were asked to participate directly, as part of the "intervention" group. Facilities chosen for the project had at least six workers' compensation claims for musculoskeletal disorders between January 2001 and June 2003. For the intervention group, direct participation involved working with WSC to identify and control ergonomic risk-factors and improve workplace safety in the facility. Facilities in both groups were asked to provide injury, illness and workers' compensation data for assessment of the impact of the project and the efforts of WSC.

The project's main focus is on OSHA compliance and establishing a comprehensive safety management system that addresses ergonomic risk-factors, with additional assistance provided for injury and workers' compensation case management. Berkley Risk Administrators Company allowed two WSC ergonomics consultants to attend a two-day course about injury and workers' compensation case management, to aide the consultants in providing assistance to participating facilities.

For participants in the intervention group, the project requires each facility receive of a "full-service" safety and health consultation determining OSHA compliance and assessing the current safety management system. Subsequent consultation visits focus on ergonomics and interventions to minimize the common injury risk-factors associated with resident-care activities.

To date, 26 sites agreed to participate as intervention group sites. Each facility has had an initial safety and health consultation, with all but one receiving subsequent ergonomic consultative assistance. After one or more scheduled ergonomic consultations, visits will only be scheduled as needed to help maintain progress toward establishing an effective safety and injury management system.

To help facilities implement elements of a comprehensive safety and health management system, a program assessment worksheet – OSHA Form 33, which evaluates 58 safety management attributes – is included in the initial safety and health consultation report. It provides guidance about how to implement elements of a comprehensive safety management system.

WSC's nursing-home project activities and the on-going high costs of injuries have increased emphasis in reducing the musculoskeletal injuries among nursing home staff members who provide direct care to residents at participating facilities. The project has also encouraged some facilities to identify and work at reducing injury risks in areas outside of nursing.

A key to success in identifying ergonomic risk-factors and reducing the associated injuries is to involve affected workers in analyzing the work tasks and determining solutions. To meet this criterion in the nursing-home project, intervention sites were asked to establish an ergonomics committee that would identify and recommend controls for ergonomic risk-factors.

One component of the nursing-home project's initial ergonomics consultation is to meet with the ergonomics committee at each facility to promote discussion about the risk factors associated with providing resident care and to brainstorm ideas about how these risks can be minimized and eliminated. These discussions have allowed workers to generate facility-specific ideas and recommendations about how to reduce injury risk-factors that contribute to injuries. This type of interaction supports the need for staff members to understand the risk factors associated with musculoskeletal injuries, the best practices for resident lifting and moving, awareness of the type of resident lifting and moving aides that are available, and the applicability of the aides.

The following are some best practices that have been identified and the progress made toward improving workplace safety at various project facilities.

- Establishing a formal "low-lift" work policy that requires analysis of tasks and modifications of work practices to eliminate "high-risk" lifting and moving tasks required of the nursing staff. This type of work policy requires the facilities to provide the equipment, education, training and staffing to abide by the policy.

- Including more specifics when tracking injury occurrences, such as the type of injury, the body part affected and the type of task that contributed to the injury. Several sites have developed more detailed tracking that identifies a type of injury (back, shoulder, etc.) and what contributed to the injury (over-bed work, transfer, resident fall, etc.). And at least one facility has developed a detailed form to summarize the injury type, the injury location, the activity triggering the injury, when the injury occurred, what body part was affected, the current level of staffing and the corrective action that was taken.

- Investing more extensively in mechanical lifts and repositioning aides. Though most facilities had lifts available, some had to re-evaluate the equipment resources and begin researching available lift equipment. Several facilities were considering or were in the process of investing in ceiling-lift systems to aide in reducing manual lifting and moving of residents. Another facility installed a ceiling-track lift system in a hallway, for use when ambulating residents. This system eliminates risk to the care staff that would otherwise be relied upon to physically support a resident or catch a resident who is suddenly unable to bear his or her own weight. Other facilities have invested in or are considering low-friction repositioning devices to minimize the physical requirements on the staff members during resident repositioning.

  An important aspect of the equipment evaluation process is to understand what is available and to relate the needs of the facility to the type of equipment necessary. Existing facility furnishings and characteristics can dictate lift features, such as range of use, size, ease of rolling on existing floor surfaces, capacity, ease of use and other special features that the staff may find useful.

- Surveying staff members to gain insight about job-task risks and their recommendations to minimize those risks. Several facilities distributed written surveys to staff members asking about any job-task difficulties. Issues that were identified and addressed included: equipment availability, the ability to

comply with care plans and established work policies, barriers to compliance with care plans and policies, tasks that are the most physically demanding and the ability to get the necessary help.

- Training staff members, using the expertise of experienced coworkers, about the best practices for preventing injury. Workers who are known to have avoided injury or have a known work method that reduces the risk of injury have been recruited to help demonstrate and train fellow employees.

- Using "feeding assistants" to alleviate some of the workload of the nursing assistants during mealtimes to allow more time for the care staff to transfer residents to dining areas.

- Recognizing employees who have contributed ideas and efforts toward improving workplace safety. Several facilities have recognized safety contributions by posting cards in prominent locations that identify the individual or group and summarize the contribution made toward improving safety.

- Clearly establishing roles and responsibilities for safety committees and other safety-related teams. Several facilities have designated one or more individuals for tasks such as injury and illness analysis and reporting, researching best practices and equipment, and quality management. For a committee to be effective, roles and responsibilities need to be clear and understood by the group.

- Thoroughly training staff members about how to use lift equipment for turning residents, lifting from the floor and ambulation. Several facilities invested in appropriate slings for various lift assists.

- Tracking resident changes in mobility on a day-to-day basis through the use of a communication sheet, significant-change form or change book and a mandatory shift-change meeting to review resident changes and related changes in care requirements.

- Using of a written hazard-tracking form and including proposed corrective action on all accident/incident

## Effective safety and health management systems

A safety management system is most effective when it clearly establishes areas where intervention is needed to reduce injury risk, improving overall safety management. These established areas can become the goals of the safety management process and typically identify areas of the management system that require further improvement and implementation. To accomplish safety management goals, specific actions or activities need to be accomplished, often referred to as objectives for each safety management goal. Establishing a detailed action plan that specifically outlines the activities, the individuals or groups assigned to complete each activity and proposed dates of completion will better ensure that necessary activities are tracked and accomplished.

Safety management goals can be determined by analyzing appropriate data to find which areas of the management system need establishment and improvement. OSHA 300 log data, first reports of injury, accident reports, and other injury and illness data can be analyzed to identify injury types, determine what tasks were performed that triggered the injury and evaluate other injury characteristics, such as occurrences by department, area, individual and time of day. Workers' compensation data can also be analyzed to identify the types of injuries that result in the most frequent and severe cases. Employee feedback is another source for determining where improvements in safety management are needed.

No safety management system can be effective without full commitment from management. There must be a belief that the activities and recommendations associated with identifying and controlling ergonomic risk-factors will be effective in reducing injuries and the subsequent costs associated with these injuries. This commitment can be demonstrated by supporting teams or committees that work to reduce the ergonomic risks, allowing time for these groups to analyze work tasks and determine effective interventions, supporting the recommendations of the teams or committees, and allowing for the necessary education and training of affected staff members. Staff members who are involved in identifying and controlling the risk-factors, who understand the risk factors that contribute to injury and who understand how these risks can be minimized, will more readily accept work-task changes that are introduced.

investigation reports. Corrective action is assigned and tracked through the safety committee.

- Including workplace safety as an agenda item for department and/or staff meetings.

- Establishing a weight restriction (such as 30 pounds) to reinforce a low-lift work policy. The restriction helps limit the type of manual lifting tasks a staff person can perform unassisted.

- Acquiring grants to assist with staff training and acquisition of equipment. Some facilities have pursued available grant opportunities to support financing of necessary equipment and training. In addition to WSC's Safety Grant Program (see page 3), one facility was awarded a job skills training grant to provide staff members with training through a local college. Other facilities have received internal grants from their funding or sponsoring associations to pursue pilot projects for the benefit of affiliated facilities.

For more information about the nursing-home project, contact:

- Dave Ferkul, nursing-home project coordinator, at (218) 733-7832; or

- Jolyn Crum, public-sector industrial hygienist and project consultant at (651) 284-5343.

## Safe Patient Handling Conference

The "Safe Patient Handling Conference," co-sponsored by the Minnesota Nurses Association (MNA), Allina Hospitals and Clinics, and Minnesota OSHA Workplace Safety Consultation, will be Oct. 21, 2005, in St. Paul, Minn.

The one-day conference emphasizes practical approaches for minimizing the risk of worker injuries in health care settings, based on case studies and experiences of Minnesota hospitals and nursing homes. It features seminars by nationally recognized speakers and includes a vendor exhibition of resident handling and transfer devices.

Additional conference and registration information is online on the MNA Web site at www.mnnurses.org.

# Employee symptom survey results

*By Brian Zaidman, Research and Statistics*

As part of the initial visit to each nursing home, the employees were given a symptom survey to complete. The survey included questions about each worker's lifting activity and, for each body area, the frequency and severity of pain, and the pain's interference with work activities during the past three months. The symptom survey is being used as a measure of ergonomic problems because many work-related musculoskeletal disorders (WMSDs) do not reach the level of severity that would cause workers to report them to their employers for inclusion on the OSHA logs or for filing workers' compensation claims. However, these WMSDs often limit the productivity of the workers and serve as early warnings for more severe WMSD episodes.

Survey responses were received from 751 RNs, LPNs and NARs from 25 nursing homes. As shown in the table below, during the three months prior to the survey, the body parts with the highest percentage of workers experiencing pain or discomfort at least monthly were the lower and upper back and the neck and shoulders, followed by the ankles and feet. The pain or discomfort to these parts interfered with work for less than half the percentage of workers reporting pain or discomfort. The pain, when present, was moderate, severe or unbearable for a significant percentage of workers. However, much smaller percentages of workers sought medical treatment for any condition relating to these body parts during the past three years, and an even smaller percentage filed a workers' compensation claim relating to pain or injury to a body part.

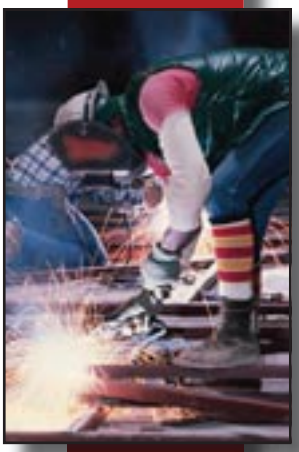
These results show that many more workers have pain than would be indicated by OSHA log or workers' compensation statistics. Attention to worker pain can avert these symptoms from becoming more severe and resulting in time loss.

**Symptom survey results for nurses and nursing aides**

| | In past three months: | | | In past three years: | |
|---|---|---|---|---|---|
| Body part | Pain or discomfort at least weekly | Pain or discomfort interfered with work at least weekly | When present, pain or discomfort is moderate to unbearable | Sought medical treatment for this part | Filed a work comp claim for pain or injury to this part |
| Neck and shoulders | 34.0% | 12.7% | 39.8% | 22.6% | 8.1% |
| Elbows and lower arms | 7.9 | 4.1 | 9.8 | 4.3 | 0.8 |
| Wrists and hands | 14.7 | 6.3 | 18.7 | 8.7 | 3.3 |
| Abdomen and chest | 3.6 | 2.3 | 7.6 | 3.1 | 0.5 |
| Upper back | 24.2 | 10.4 | 32.5 | 15.3 | 4.7 |
| Lower back | 43.8 | 17.8 | 52.4 | 28.5 | 12.7 |
| Hips and thighs | 16.2 | 7.4 | 19.5 | 10.0 | 1.6 |
| Knees and calves | 21.8 | 8.7 | 24.1 | 8.0 | 1.7 |
| Ankles and feet | 29.5 | 11.9 | 30.9 | 7.2 | 1.1 |

# Research highlights:
# *Minnesota Workplace Safety Report*

*By Brian Zaidman, Senior Research Analyst*
*Research and Statistics*



Minnesota's workplaces became safer for workers during 2003. The latest occupational injury and illness figures show there were an estimated 111,600 recordable injury and illness cases in 2003; about 29,900 cases involved one or more days away from work. The comparable figures for 2002 were 120,500 total cases and 33,500 days-away-from-work cases. There were 72 work-related fatalities in 2003, down from 81 fatalities in 2002.

The latest occupational injury and illness figures show that about 310 Minnesotans are hurt at work or become ill from job-related causes each day. These injuries, illnesses and deaths exact a toll on workers and their families and also affect business costs and productivity. Workers' compensation costs in Minnesota approached $1.5 billion in 2003. In 2002 (the most current data available), the average cost of an insured claim was more than $6,500. There are a myriad of other costs of workplace injuries and illnesses that are more difficult to measure, such as delayed production, hiring and training of new workers, pain and suffering, and those economic and non-economic losses to injured workers and their families that are not covered by workers' compensation.

The Department of Labor and Industry (DLI) has released its annual *Minnesota Workplace Safety Report*, detailing injury and illness rates and workplace fatalities for 2003. The report is based on the U.S. Bureau of Labor Statistics' *Survey of Occupational Injuries and Illnesses* and *Census of Fatal Occupational Injuries* (CFOI). The report is available on the DLI Web site at www.doli.state.mn.us/rsreport.html.

The following are the major highlights from that report.

**Nonfatal occupational injuries and illnesses**

- An estimated 111,600 nonfatal workplace injuries and illnesses were reported in Minnesota's private industry and public sector workplaces during 2003, resulting in a rate of 5.5 cases per 100 full-time-equivalent (FTE) workers. The 2002 injury and illness rate was 6.0 cases per 100 FTE workers.

- An estimated 57,000 cases in 2003 resulted in days away from work, job transfer or restrictions. The rate for these injuries was 2.8 cases per 100 FTE workers, a 10 percent decrease from the 2002 rate.

- The rate of cases with days away from work was 1.5 per 100 FTE workers, compared to 1.7 cases in 2002.

***Safety report***, continues ...

***Safety report***, continued ...

- Minnesota's private sector total and lost-workday case rates were below the total U.S. rates until the early 1990s, but have been significantly above the U.S. rates since 1996. For the private sector in 2002, the total case rate was 5.5 for the state versus 5.0 for the nation.

- Minnesota's rate of cases with days away from work was roughly equal to the national rate starting in 1996, and it dropped below the national rate in 2003: 1.4 for the state vs. 1.5 for the nation.

**Industry subsectors with the highest total case rates, Minnesota, 2003**

| Industry | Rate per 100 FTE workers |
|---|---|
| Nursing and residential care – local government | 17.7 |
| Transportation equipment manufacturing | 17.3 |
| Couriers and messengers | 13.6 |
| Primary metal manufacturing | 12.8 |
| Wood product manufacturing | 12.7 |
| Animal production | 12.5 |
| Nursing and residential care facilities – private | 10.5 |
| Warehousing and storage | 9.8 |
| Hospitals – local government | 9.6 |
| Construction of buildings | 9.6 |

- Minnesota's industry sectors with the highest total injury and illness rates per 100 FTE workers were: construction (9.3); agriculture, forestry, fishing and hunting (8.8); and manufacturing (7.5).

- Four of the 10 industry subsectors with the highest total case rates were in manufacturing and three were in health care and social assistance. These industries accounted for 16 percent of the recordable cases.

Additional statistics about the characteristics of the injured workers, the characteristics of their injuries and the amount of time away from work are available for cases with days away from work.

- Sprains and strains accounted for 45 percent of the cases with days away from work. The second-highest category was soreness and pain, accounting for 10 percent of the cases.

- The back and upper extremities were the most commonly injured body parts, accounting for nearly half the cases.

***Safety report***, continues ...

***Safety report***, continued ...

- Overexertion, often while lifting people or objects, falls and contact with objects and equipment were the most common injury events.

- The injured worker's own motion or bodily position was the most frequent source of injury, followed by floors and ground surfaces, and containers.

**Fatal occupational injuries**

The CFOI covers all fatal work injuries in the private and public sectors, regardless of program coverage; thus, it includes federal workers and self-employed workers, along with all others. However, fatal *illnesses* (such as asbestosis) are excluded.

- In 2003, 72 Minnesotans were fatally injured on the job.

- Among industry sectors, agriculture, forestry, fishing and hunting recorded the highest number of worker fatalities, with 19. Construction and transportation and warehousing had the second-highest number of fatalities, with 10 cases each.

- The most frequent causes of Minnesota's fatal work injuries for 2003 were: highway transportation accidents (25 percent); struck by a falling object (15 percent); and falls to a lower level (13 percent).

## Safety allies: Workplace Safety Consultation, Minnesota Mechanical Contractors Association

Minnesota Mechanical Contractors Association recently signed on as an ally in Minnesota OSHA Workplace Safety Consultation's Alliance Program. The agreement enables organizations committed to workplace safety and health to collaborate with MNOSHA to prevent injuries and illnesses in the workplace. MNOSHA and its allies work together to reach out to, educate and lead the nation's employers and their employees in improving and advancing workplace safety and health.

At left: Steve Patterson, executive vice president, Minnesota Mechanical Contractors Association, and Roslyn Wade, assistant commissioner, Minnesota Department of Labor and Industry, sign the alliance agreement.

MINNESOTA SAFETY HAZARD ALERT

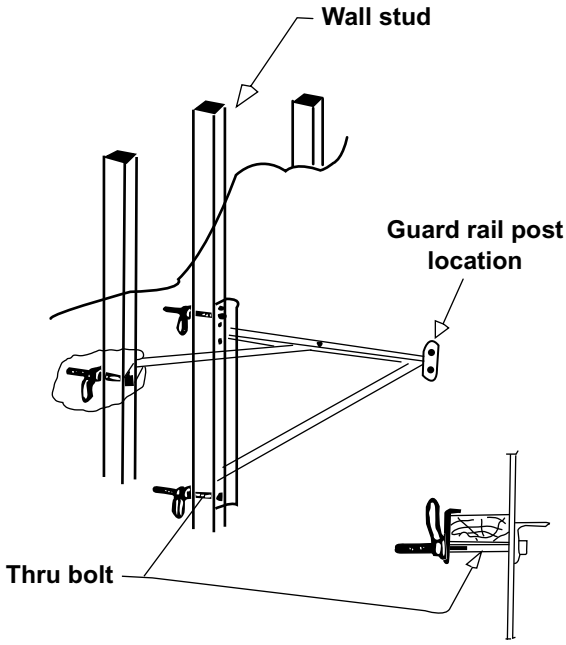
Minnesota Department of Labor and Industry
Occupational Safety and Health Division
443 Lafayette Road N.
St. Paul, MN 55155
1-877-470-OSHA/1-877-470-6742

# Carpenter bracket scaffolds

**Initiative**

Each year, the Minnesota Occupational Safety and Health Administration (MNOSHA) investigates numerous accidents due to the improper installation and use of carpenter brackets on construction sites.

The purpose of this Minnesota OSHA Safety Hazard Alert is to heighten public awareness of the proper installation techniques and use of these brackets to prevent the scaffolds from collapsing.




**Description of the hazard**

Factors that can lead to carpenter bracket scaffold failure include:

- exceeding the maximum intended load on any particular section, i.e., no more than two employees and 75 pounds of tools and materials should occupy any given eight feet of the bracket at one time;
- use of nails to attach brackets to the wall, rather than using the required bolts;
- use of homemade brackets that have not been rated by a qualified engineer;
- attaching the scaffold only through the wall sheathing and not through or around a wall stud; and
- installation of the scaffold by someone other than a competent person.

**Controlling and eliminating the hazard**

One key method to prevent carpenter bracket accidents is to attach the scaffold to the structural wall with the bolts going all the way through the stud and sheathing. A bolt size of at least 5/8" in diameter is recommended. (See diagram.) An alternative is to attach the scaffold with J-bolts going through the sheathing and around the stud.

The manufacturer's recommendations for bracing should be followed when installing the scaffold. Manufacturers commonly supply a diagonal brace extending from the top bracket, near where the planking rests, back to the wall. The function of the brace is to stabilize the bracket. According to most manufacturers, this brace can be secured with a nail. Refer to the manufacturer's instructions for the size of nail that may be used.

A maximum bracket spacing of no more than eight feet on centers should be maintained, and the platform must be at least 18" wide and fully decked. Any carpenter bracket scaffold platform that exceeds 10 feet above the adjacent ground or floor must be provided with a guardrail or all occupants must use personal fall arrest systems. No more than two people should be on a scaffold section at any one time and a means of access, such as a ladder, must be provided and secured.

**For more information**

Employers and employees with questions or concerns can consult the federal OSHA Web site at www.osha.gov or contact MNOSHA Compliance at (651) 284-5050 or toll-free at 1-877-470-6742. For more information about requirements and recommendations, refer to 29 CFR 1926.451, 29 CFR 1926.452(g) and 29 CFR 1926 Subpart L Appendix A(2)(g). For the use of carpenter bracket scaffolds in general industry, refer to 29 CFR 1910.28(k).

**Acknowledgements**

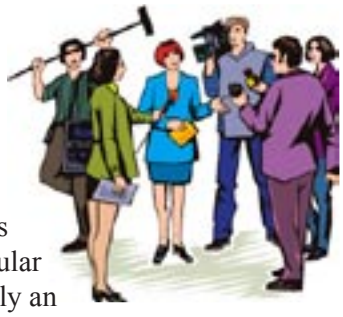
The principal contributors to this Minnesota OSHA Safety Hazard Alert were Bob Darling and Dustin Privette.

*Recordkeeping 101: Part 4*

# Tell me what happened, describing the event

*By Brian Zaidman, Research Analyst, Research and Statistics*

*Editor's note: This is the fourth installment of a series about using the OSHA Form 300 and summarizing its results. This information is directed to people who are new to OSHA recordkeeping activities, to people who might be unfamiliar with the 2002 recordkeeping changes and to people who want to review their recordkeeping practices. This installment deals with describing injuries and illnesses.*



This installment explains how to describe an event's location (OSHA log column E) and injury characteristics (column F). Previous installments of this series discussed basic OSHA recordkeeping requirements, the process for classifying cases as either days away from work, job transfer or restriction, or other recordable cases, and how to count days for the days-away-from-work cases and cases with job transfer or restriction.

**Why describe the injuries, illnesses on the log?**

While case classification and the number of days away from work provide quantitative descriptions that can be easily summarized, injury and illness descriptions provide specific information that employers, safety directors and workplace safety committees can use to improve workplace safety.

Although employers must complete an Injury and Illness Incident Report (OSHA Form 301) and/or a workers' compensation First Report of Injury (FROI) form for each injury or illness recorded on the log, the log provides an official record of work-related injuries and illnesses for a work establishment that can be reviewed by all employees, former employees, their personal representatives and collective bargaining agents. It provides an at-a-glance overview of the number and types of injuries and illnesses, without providing a too-detailed account of each incident.

## Contact MNOSHA

***Minnesota OSHA Compliance (MNOSHA)***
(651) 284-5050
1-877-470-6742

***Workplace Safety Consultation (WSC)***
(651) 284-5060
1-800-657-3776

***Recordkeeping packet***
(651) 284-5042
1-800-342-5354

Incident reports and FROI forms are detailed accounts of a particular injury to a particular worker; only an injured worker or that worker's personal representative is allowed access to the full incident report or FROI form for a particular case.

**How much should be written?**

At first glance, it appears the log offers too little space in columns E and F to write descriptions of where the event occurred, the nature of the injury, the part of body affected and the source of the injury or illness. However, the instructions at the top of the log allow you to "use two lines for a single case if you need to." You may use even more lines, if needed. Include enough information to provide a complete, though brief, description of the injury. The description "burned arm" provides some information, but "second-degree burns on right forearm from acetylene torch" provides a much better (yet still brief) understanding of the injury.

**Do I need to make a diagnosis?**

When you are certain of a diagnosis, that diagnosis must be included. Oftentimes, when an injury occurs or when a worker first reports an illness, the actual nature of the injury or illness is not immediately known. The worker may be able to describe only a pain, soreness, discomfort or nausea. In these events, it is not necessary to write down this initial description or to try to diagnose the injury or illness yourself. You have a seven-day period to record a log entry, during which time detailed information may become available. At the time of entry, you should enter the best available diagnosis; afterward, as more information becomes available, you are expected to update the log with that information.

One good strategy is to write a full injury or illness description on the incident report or FROI form. These forms provide more space and divide the description

***Recordkeeping***, continues ...

into several questions. Then you can summarize the answers into the log. Items 14 through 17 on the incident report can guide you through the process as follows:

14. **What was the employee doing just before the incident occurred?** Describe the activity, as well as the tools, equipment or material the employee was using. Be specific.
15. **What happened?** Describe how the injury occurred.
16. **What was the injury or illness?** Describe the part of the body that was affected and how it was affected. Be more specific than "hurt," "pain" or "sore."
17. **What object or substance directly harmed the employee?**

A fall off a ladder could be described as:

14. Worker painting building exterior with power sprayer
15. Worker lost balance and fell off ladder
16. Broke left ankle
17. Injured when hit the ground

This can be summarized on the log in column E, the event location, as "exterior of building," and in column F as, "fell off ladder, broke left ankle on ground."

**Neatness counts!**

The log is available for review by employees, former employees, personal representatives, collective bargaining representatives and by government officials. The log must be kept available for five years after the year of the cases described on the log, so there is likely to be turnover in the staff that is responsible for maintaining the log. Therefore, it is important that case entries be kept neat and legible. It is easy for someone to infer that a sloppy log means its accuracy is questionable or that management is not concerned with worker safety and health.

## *Online resources*

***Federal OSHA recordkeeping resources***
- www.osha.gov/recordkeeping/index.html

***MNOSHA recordkeeping resources***
- www.doli.state.mn.us/recordkeeping.html

***MNOSHA WSC recordkeeping training***
- www.doli.state.mn.us/osheven.html

***Survey of Occupational Injuries and Illnesses***
- www.bls.gov/iif
- www.doli.state.mn.us/dlistats.html

***Packet of recordkeeping forms, instructions***
- www.osha.gov/recordkeeping/RKforms.html

***Booklet:* Minnesota OSHA recordkeeping requirement**
- www.doli.state.mn.us/pdf/recordkeepingstandard.pdf

**Next installment:**


## Federal, state OSHA form alliance with polyurethane industry group

Minnesota OSHA joined state OSHA programs from Indiana and Michigan, along with federal OSHA offices in Illinois, Ohio and Wisconsin to form an alliance with the Alliance for the Polyurethanes Industry (API), a business unit of the American Plastics Council, that focuses on reducing and preventing exposure to hazardous substances for workers employed in the application of spray-on truck bed liners.

As part of the alliance, API will encourage the spray-on truck bed liner industry to build relationships with OSHA's regional and area offices to address health and safety issues, including the proper use, storage, fit and evaluation of personal protective equipment and respirators, the proper use and maintenance of truck bed liner application equipment and design of a ventilation booth, and clear, consistent interpretation of OSHA federal or state regulations pertaining to the spray-on truck bed liner industry.

Photo from www.line-x.com

*Editor's note:* Watch for a summary of MNOSHA's inspections in this industry in the next edition of *Safety Lines*.